

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A volume hologram medium, wherein an image of a three-dimensional object and an image of a plane pattern are multi-recorded in a reflection hologram form, the image of the three-dimensional object and the image of the plane pattern being comprised by interference fringes formed by interference of the same-reference light beams with diffracted light beams, the diffracted light beams being created by the reference light beam, and having the same angle of incidence and the same wavelength with object light beams having mutually different angles of incidence, and
the reference light beams having the same angle of incidence, and the same wavelength, as object light beams.

2. (original): The volume hologram medium according to claim 1, wherein a hologram of said image of a plane pattern is selectively recorded in only an area corresponding to said plane pattern and as a hologram comprising parallel interference fringes in one section at an angle with respect to at least a recording plane.

3. (currently amended): The volume hologram medium according to claim 2, wherein said section includes a normal to said recording plane, said hologram of said image of a plane pattern is

recorded in such an angle relation that object light and reference light are incident on said recording plane at substantially identical angles of incidence on the same side with respect to said normal ~~to said recording plane~~ and from mutually opposite directions between said recording plane is interposed, and a hologram of said image of a three-dimensional object is recorded in such an angle relation that a center light ray of said object light is substantially vertically incident on said recording plane.

4. (currently amended): The volume hologram medium according to claim 2 or 3, wherein said hologram of said image of a plane pattern is recorded by interference of object light ~~and reference light~~ that diffuses in only a direction crossing at right angles with said section and reference light.

5. (currently amended): The volume hologram medium according to ~~any one of claims 1 to 4~~, wherein said image of a plane pattern is an image of a painted design or micro-characters.

6. (currently amended): The volume hologram medium according to ~~any one of claims 1 to 4~~, wherein said image of a plane pattern is an image of an array of lines or dots.

7. (currently amended): The volume hologram medium according to ~~any one of claims 1 to 6~~, wherein at least one of said image of a three-dimensional object and said image of a plane pattern is multi-recorded at two or more different wavelengths.

8. (currently amended): The volume hologram medium according to ~~any one of claims 1 to~~ 7, wherein a hologram photosensitive material comprises a photopolymer.

9. (currently amended): A volume hologram medium, wherein a plurality of plane pattern images are multi-recorded as a reflection hologram, the plurality of plane pattern images being comprised by interference fringes formed by interference of reference light beams with diffracted light beams, the diffracted light beams being created by the reference light beams of the same reference light beams,
the reference light beams having the same angle of incidence and the same wavelength with object light beams having mutually different angles of incidence.

10. (original): The volume hologram medium according to claim 9, wherein an image of a three-dimensional object is multi-recorded by interference of reference light having the same angle of incidence and wavelength as those of said reference light used for recording said plurality of plane pattern images with object light having an angle of incidence different from that of said object light used for recording to said plurality of plane pattern images.

11. (currently amended): The volume hologram medium according to claim 9 ~~or 10~~, wherein each hologram of said plurality of plane pattern images is selectively recorded in only an area corresponding to each plane pattern, and as a hologram comprising parallel interference fringes in one section at an angle with respect to at least a recording plane.

12. (currently amended): The volume hologram medium according to ~~any one of~~ claims ~~9 to 11~~, wherein said plurality of plane pattern images comprise an image of the same plane pattern.

13. (currently amended): The volume hologram medium according to claim 11 ~~or 12~~, wherein each hologram of said plurality of plane pattern images is recorded by interference of object light and reference light that diffuse in only a direction crossing at right angles with said section.

14. (currently amended): The volume hologram medium according to ~~any one of~~ claims ~~9 to 13~~, wherein said plurality of plane pattern images are multi-recorded at two or more different wavelengths.

15. (original): A method for authentication of a volume hologram medium having an image of a three-dimensional object and an image of a plane pattern multi-recorded in a reflection hologram form by interference of the same reference light beams having the same angle of incidence and the same wavelength with object light beams having mutually different angles of incidence, wherein:

an image of an array of lines or dots is recorded as said image of a plane pattern, and a pattern film on which an array of lines or dots is drawn at the same pitch as that of said plane pattern comprising an array of lines or dots is brought in alignment with said volume hologram medium, so that said volume hologram medium can be authenticated with moiré fringes created between said

image of a plane pattern and a plane pattern comprising an array of lines or dots on said pattern film.

16. (original): The method for authentication of a volume hologram medium according to claim 15, wherein said image of a plane pattern is recorded in such a way as to be reconstructible near to a hologram plane of said volume hologram medium.